

AMENDMENTS TO THE CLAIMS:

The following listing of claims is intended to replace all previous claim listings:

1. (Currently Amended) A method of ~~providing direct blood flow between~~ treating a heart chamber and a coronary vessel, the method comprising the steps of:

placing a guidewire ~~guide device~~ through an anterior wall and a posterior wall of the coronary vessel and through a heart wall between the heart chamber and the coronary vessel;

advancing a catheter carrying a stent along the guidewire through the anterior wall and the posterior wall of the coronary vessel and into the heart wall;

~~forming a passageway in the heart wall at a location defined by the guide device;~~
and

expanding ~~[[a]]~~ the stent within the heart wall passageway.

2. (Currently Amended) The method of claim ~~[[1]]~~ 89, wherein forming the passageway includes providing a dilation mechanism at the location defined by the guidewire ~~guide device~~.

3. (Withdrawn) The method of claim 2, wherein the dilation mechanism includes a sheath.

4. (Original) The method of claim 2, wherein forming the passageway further includes expanding the dilation mechanism.

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5. (Currently Amended) The method of claim 4, wherein the expanding the dilation mechanism includes inflating the dilation mechanism.

6. (Previously presented) The method of claim 1, wherein the stent is a collapsible stent.

7. (Currently Amended) The method of claim ~~[[1]]~~ 89, further comprising delivering via the guidewire ~~guide-device~~ a first mechanism for forming the passageway in the heart wall and a second mechanism for placing the stent within the passageway.

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8. (Withdrawn-Currently Amended) The method of claim 7, wherein the first and second mechanisms are delivered via the guidewire ~~guide-device~~ to the heart simultaneously.

9. (Currently Amended) The method of claim 7, wherein the first mechanism is delivered via the guidewire ~~guide-device~~ to the heart and, after the first mechanism is removed from the heart via the guidewire ~~guide-device~~, the second mechanism is delivered via the guidewire ~~guide-device~~ to the heart.

10. (Previously Presented) The method of claim 7, wherein the second mechanism includes a stop mechanism and wherein the method further comprises advancing the stent within the passageway until the stop mechanism engages one of a

wall of the coronary vessel and a surface of the heart wall.

11. (Original) The method of claim 10, wherein the stent is advanced until the stop mechanism engages the posterior wall of the coronary vessel.

12. (Original) The method of claim 11, wherein the stop mechanism is located at substantially a proximal end of the stent during the delivery of the stent.

13. (Original) The method of claim 7, wherein the first mechanism includes a stop mechanism and delivering the first mechanism includes engaging the stop mechanism with at least one inner wall of the coronary vessel.

14. (Original) The method of claim 13, wherein engaging the stop mechanism includes expanding the stop mechanism.

15. (Previously Presented) The method of claim 1, further comprising measuring a distance from the anterior wall of the coronary vessel to the heart chamber prior to placing the guide device.

16. (Cancelled).

17. (Currently Amended) The method of claim 1, further comprising the step of inserting a hollow needle through the anterior wall and the posterior wall of the coronary

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vessel and the heart wall, prior to placing the guidewire ~~guide device~~.

18. (Currently Amended) The method of claim 17, wherein ~~the guide device is a~~
~~guidewire~~, and the step of placing the guidewire ~~guide device~~ includes inserting the
guidewire through the hollow needle until an end of the guidewire rests in the heart
chamber.

19. (Original) The method of claim 18, further comprising the step of removing
the hollow needle after inserting the guidewire through the hollow needle.

20. (Original) The method of claim 17, further comprising the step of measuring a
depth of insertion of the hollow needle.

21. (Original) The method of claim 20, wherein the measuring step includes
viewing markings on the hollow needle, the markings indicating the depth of insertion of
the hollow needle.

22. (Original) The method of claim 21, further comprising determining the
thickness of the heart wall by subtracting a diameter of the coronary vessel from the
distance measured by the needle, and selecting said stent based on the heart wall
thickness.

23. (Original) The method of claim 17, further comprising avoiding intracardiac

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structures during insertion of the hollow needle.

24. (Currently Amended) The method of claim 1, further comprising placing the guidewire ~~guide device~~ at a predetermined angle relative to the posterior wall of the coronary vessel.

25. (Currently Amended) The method of claim 24, wherein placing the guidewire ~~guide device~~ at a predetermined angle includes inserting a hollow needle at the predetermined angle through the anterior wall and the posterior wall of the coronary vessel and the heart wall, prior to placing the guidewire ~~guide device~~.

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26. (Withdrawn-Currently Amended) The method of claim 1, wherein forming the passageway includes inserting a sheath into the location defined by the guidewire ~~guide device~~.

27. (Currently Amended) The method of claim [[1]] 89, wherein forming the passageway includes inserting a balloon into the location defined by the guidewire ~~guide device~~ and inflating the balloon.

28. (Currently Amended) The method of claim 27, wherein inserting the balloon includes inserting a catheter carrying the balloon over the guidewire ~~guide device~~.

29. (Original) The method of claim 27, further comprising deflating the balloon

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after forming the passageway, and removing the balloon from the passageway after deflating the balloon.

30. (Previously Presented) The method of claim 1, wherein expanding the stent includes expanding the stent with an expansion device.

31. (Original) The method of claim 30, wherein the expansion device includes an inflation device.

32. (Currently Amended) The method of claim 31, wherein the inflation device is a balloon that carries the stent, and expanding the stent includes inserting the balloon and the stent within the heart wall passageway and inflating the balloon.

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33. (Currently Amended) The method of claim 32, wherein inserting the balloon and the stent includes inserting ~~[[a]]~~ the catheter carrying the balloon and the stent over the guidewire guide-device.

34. (Withdrawn-Currently Amended) The method of claim ~~[[1]]~~ 89, wherein the passageway is formed and the stent is delivered by ~~[[a]]~~ the catheter carrying a first expansion device and a second expansion device.

35. (Withdrawn) The method of claim 34, wherein the first and second expansion devices include inflation devices.

36. (Withdrawn) The method of claim 35, wherein the first inflation device is a first balloon and the second inflation device is a second balloon.

37. (Withdrawn-Currently Amended) The method of claim 36, further comprising inserting the catheter over the guidewire ~~guide device~~ so that the first balloon is positioned in the location.

38. (Withdrawn) The method of claim 37, further comprising inflating the first balloon to form the passageway.

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39. (Withdrawn-Currently Amended) The method of claim 38, further comprising deflating the first balloon after forming the passageway, and further inserting the catheter over the guidewire ~~guide device~~ so that the second balloon is positioned in the passageway.

40. (Withdrawn-Currently Amended) The method of claim 39, wherein the second balloon carries [[a]] the stent, and further comprising inflating the second balloon to place the stent within the passageway.

41. (Withdrawn-Currently Amended) The method of claim 37, wherein the second balloon is positioned within the coronary vessel when the first balloon is positioned [[in]] at the location.

42. (Withdrawn) The method of claim 41, further comprising inflating the second balloon so that the second balloon engages at least one interior wall of the coronary vessel and inflating the first balloon, the first balloon carrying the stent.

43. (Currently Amended) The method of claim 1, further comprising advancing the stent within the heart wall passageway until a stop mechanism engages the posterior wall of the coronary vessel.


44. (Original) The method of claim 43, wherein the stop mechanism is provided proximate a proximal end of the stent.

45. (Previously Presented) The method of claim 1, further comprising engaging a stop mechanism with at least one interior wall of the coronary vessel.

46. (Currently Amended) A method of treating a heart ~~providing direct blood flow between a heart chamber and a coronary vessel~~, the method comprising:

inserting a needle through an anterior wall and a posterior wall of the coronary vessel;

placing a guidewire through the needle past the anterior wall and the posterior wall of the coronary vessel and through a heart wall between the heart chamber and the coronary vessel;


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inserting an expansion device along the guidewire through the anterior wall and the posterior wall of the coronary vessel and into the heart wall;

expanding the expansion device within the heart wall to form a passageway between the heart chamber and the coronary vessel; and

placing a stent within the passageway.

47. (Original) The method of claim 46, wherein the stent is collapsible and placing the stent within the passageway includes delivering the stent to the passageway in a collapsed configuration and then expanding the stent within the passageway.

48. (Original) The method of claim 47, wherein delivering the stent includes providing an inflatable delivery mechanism onto which the stent is loaded and expanding the stent includes inflating the delivery mechanism.

49. (Withdrawn) The method of claim 46, wherein the expansion device includes a first expandable mechanism and a second expandable mechanism, and expanding the first expandable mechanism forms the passageway and expanding the second expandable mechanism places the stent within the passageway.

50. (Withdrawn) The method of claim 49, wherein the first and second expandable mechanisms are inflatable mechanisms and the expanding the first and second expandable mechanisms includes inflating the first and second expandable mechanisms.

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51. (Original) The method of claim 46, further comprising determining the thickness of the heart wall prior to inserting the expansion device, wherein the stent is selected based on the thickness of the heart wall.

52. (Cancelled).

53. (Cancelled).

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54. (Original) The method of claim 53, wherein the step of inserting the guidewire includes inserting the guidewire through the hollow needle until an end of the guidewire rests in the heart chamber.

55. (Original) The method of claim 54, further comprising the step of removing the hollow needle after inserting the guidewire through the hollow needle.

56. (Original) The method of claim 53, further comprising the step of measuring a depth of insertion of the hollow needle.

57. (Original) The method of claim 53, further comprising avoiding intracardiac structures during insertion of the hollow needle.

58. (Original) The method of claim 46, wherein the expansion device is a balloon catheter and inserting the expansion device includes advancing the catheter over the guidewire until a distal balloon at a distal end of the balloon catheter is within the heart wall.

59. (Withdrawn) The method of claim 58, wherein the balloon catheter includes the distal balloon and a proximal balloon, and inflating the distal balloon forms the passageway and inflating the proximal balloon places the stent within the passageway.

60. (Withdrawn) The method of claim 59, further comprising, after forming the passageway, deflating the distal balloon and advancing the balloon catheter so that the distal balloon rests in the left ventricle and the proximal balloon is in the passageway.

61. (Withdrawn) The method of claim 59, wherein the stent is loaded on the proximal balloon in a collapsed configuration and inflating the proximal balloon expands the stent and places the stent within the passageway.

62. (Original) The method of claim 58, wherein the stent is placed by a second catheter carrying a second expansion device.

63. (Original) The method of claim 62, wherein the second expansion device is a balloon and the balloon is inflated to place the stent.

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64. (Original) The method of claim 62, wherein the balloon catheter is removed after the passageway is formed and then the second catheter is inserted into the formed passageway to place the stent.

65. (Currently Amended) The method of claim 46, wherein inserting the expansion device includes inserting the expansion device over ~~a guide device~~ the guidewire extending between the heart wall and exterior the heart chamber and the coronary vessel.

66-88. (Canceled).

89. (New) The method of claim 1, further comprising forming a passageway in the heart wall at a location defined by the guidewire.

90. (New) The method of claim 89, wherein the step of forming the passageway is prior to the step of advancing the stent.

91. (New) The method of claim 89, wherein the step of forming the passageway is prior to the step of expanding the stent.

92. (New) The method of claim 89, wherein the stent is advanced into the passageway.

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93. (New) The method of claim 89, wherein expanding the stent includes expanding the stent in the passageway.

94. (New) The method of claim 89, wherein advancing the stent includes placing the stent in the passageway.

95. (New) The method of claim 1, further comprising placing the stent in the heart wall so as to permit blood to flow between the heart chamber and the coronary vessel via the stent.

96. (New) The method of claim 95, wherein the heart chamber is a left ventricle.

97. (New) The method of claim 96, wherein the coronary vessel is a coronary artery.

98. (New) The method of claim 46, further comprising placing the stent in the heart wall so as to permit blood to flow between the heart chamber and the coronary vessel via the stent.

99. (New) The method of claim 98, wherein the heart chamber is a left ventricle.

100. (New) The method of claim 99, wherein the coronary vessel is a coronary artery.

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101. (New) A method of treating a heart, the method comprising the steps of:
inserting a needle through an anterior wall and a posterior wall of the coronary vessel;

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placing a guidewire through the needle past the anterior wall and the posterior wall of the coronary vessel and through a heart wall between the heart chamber and the coronary vessel;

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advancing a stent along the guidewire through the anterior wall and the posterior wall of the coronary vessel and into the heart wall; and
expanding the stent within the heart wall.
